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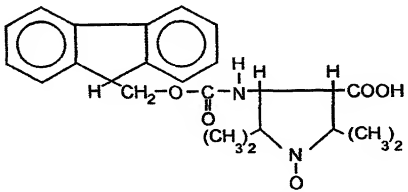
(54) Title: SYNTHESIS OF A NOVEL PARAMAGNETIC AMINO ACID DERIVATIVE (EPM-5) FOR LABELLING CHEMICAL AND BIOLOGICAL MACROMOLECULES



Structure of Fmoc-Poac.

(57) Abstract: The present invention refers to the synthesis and application of 2,2,5,5-tetramethylpyrrolidine-N-oxyl-(9-fluorenylmethyloxycarbonyl)-3-amine-4-carboxylic acid, a novel paramagnetic (spin label) amino acid derivative denominated as Fmoc-POAC whose structure is seen in Figure 1. Fmoc-POAC can be coupled to peptide sequences and other systems. It can be inserted anywhere in a peptide segment, even at an internal position, after removal of its temporary amine protecting group, Fmoc. Owing to its pyrrolidine structure, this molecule may induce differentiated conformations if compared with the normal alpha-amino acids, thus becoming a valuable probe for structural-biological activity of certain peptides. The POAC-angiotensin II analogue was synthesized as a model according to the use of the chemical derivative.

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